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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/743,002	11/01/96	DAMSOHN	027743042

QM61/1210  
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EXAMINER
LEU.L

ART UNIT	PAPER NUMBER
3743	

DATE MAILED: 12/10/98

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.

08/743,002

Applicant(s)

Damsohn et al.

Examiner

Leonard R. Leo

Group Art Unit

3743



☒ Responsive to communication(s) filed on Sep 17, 1998

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1-22 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-15 and 17-22 is/are rejected.

☒ Claim(s) 16 is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been  
☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 8

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8, 10-15 and 17-22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Karbach et al in view of Melnyk et al.

Karch et al discloses all the claimed limitations except latticed tube bottoms.

Melnyk et al discloses a heat exchanger comprising a shell 12 joined to latticed tube bottoms 24 receiving a plurality of tubes 18 for the purpose of providing a fluid tight manifold.

Since Karbach et al and Melnyk et al are both from the same field of endeavor, the purpose disclosed by Melnyk et al would have been recognized in the pertinent art of Karbach et al.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Karbach et al latticed tube bottoms receiving the tubes for the purpose of providing a fluid tight manifold as recognized by Melnyk et al.

Although Melnyk et al discloses the bottoms 24 and tubes 18 are brazed, one of ordinary skill in the art would employ welding to achieve stronger joints.

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Regarding claim 2, Melnyk et al discloses welding the jacket 12 to the connections 42, 46. As noted above, although Melnyk et al discloses the bottoms 24 and the shell 12 are brazed, one of ordinary skill in the art would employ welding to achieve stronger joints.

Regarding claims 3-8 and 22, Karbach et al discloses rectangular tubes (Figure 2) composed of tube halves 14 with insert 20 having lugs 21, 22. Further, employing a welded joint between the flanges 14 of Karbach et al requires only routine skill in the art. Regarding claims 4-6 and 22, the claimed limitations are obvious variants of the lugs on the insert.

Regarding claims 10 and 19, the specific fastening connection and location is considered to be an obvious design expedient, which produces no new and/or unexpected results and solves no stated problem.

Regarding claims 11-15, Karbach et al meets the claimed limitations.

Regarding claim 17, Melnyk et al discloses the shell 12 is composed of halves 14.

Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Karbach et al in view of Melnyk et al as applied to claims 1-8, 10-15 and 17-22 above, and further in view of Kun et al.

The device of the combination of Karbach et al and Melnyk et al lacks spacing elements.

Kun et al discloses a heat exchanger comprising a tube bottom 8 and a plurality of tubes 1 with spacing elements 17 for the purpose of strengthening the heat exchanger and improving heat exchange.

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Since Karbach et al and Kun et al are both from the same field of endeavor, the purpose disclosed by Kun et al would have been recognized in the pertinent art of Karbach et al.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Karbach et al tube pacing elements for the purpose of strengthening the heat exchanger and improving heat exchange as recognized by Kun et al.

Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 11 recites the limitations "the front" in line 3 and "the rear" in line 5. There is insufficient antecedent basis for these limitations in the claim. It is suggested -- upstream -- and -- downstream -- be substituted.

Claim 16 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art made of record and not relied upon is considered pertinent to applicants' disclosure.

The rejections in view of Hersh and Behr have been withdrawn.

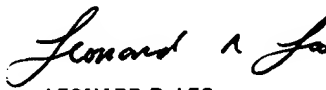
No further comments are deemed necessary at this time.

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Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication should be directed to Leonard R. Leo whose telephone number is (703) 308-2611.

  
LEONARD R. LEO  
PRIMARY EXAMINER  
ART UNIT 3743

December 7, 1998